

Emergency Responders Communications Manual



CLARK COUNTY WASHINGTON

Revised April 14, 2006

Table of Contents

SECTION ONE: GENERAL RADIO GUIDELINES	4
Radio Transmissions	4
SECTION TWO: RADIO BASICS	6
Radio Types	6
Radio Channels and Templates	6
800 MHz Radio Features	6
SECTION THREE: FIRE/EMS OPERATIONS	7
Fire Tap.....	7
Fire Com	7
OPS/TAC.....	7
Fire/EMS Dispatch	7
Emergency Traffic	10
SECTION FOUR: RADIO IDENTIFIERS.....	12
Radio Identifier Composition.....	12
Radio Identifier Composition Exception.....	12
Radio Identifier Examples.....	12
SECTION FIVE: COMPUTER AIDED DISPATCH (CAD).....	13
Non-Medical Call Types	13
Medical Call Types.....	13
SECTION SIX: INTEROPERABILITY	14
Law Enforcement References	14
SECTION SEVEN: MEDICAL AND MILITARY AIR SUPPORT	15
GLOSSARY	17
Appendix A – Clear Speech Radio Transmissions.....	19
Appendix B – Twenty-four Hour Time.....	20
Appendix C – Dispatch Center Radio Channel Identification	21

Appendix D – Radio Template	22
Appendix E – 800 MHz Radio Features.....	22
Appendix F– Emergency Egress Guidelines.....	23
Appendix G – Radio Identifiers	25
Appendix H– Law Enforcement Radio Codes	27
Appendix I – Law Enforcement Radio Identifiers.....	28

SECTION ONE: General Radio Guidelines

Field units shall first give the assigned radio identifier (e.g. Fire Com) when calling Dispatch, followed by their assigned unit identifier (e.g. Engine 4-1). Communications both to and from units and the dispatcher shall be conducted in a businesslike manner, using proper language and correct procedures. Use specific, clear, concise language in all transmissions. Be brief and to the point. Avoid slang.

All personnel should be aware that all voice communications are not only subject to FCC rules and regulations, but are also recorded within the Dispatch Center. Radio and MDC database records are public records and are available to anyone who makes a request. These radio frequencies are also monitored by the media and the public. Non-professional conduct loses its humor when later used as a reference, or when the data is subpoenaed into court for trial action.

Radio transmissions will be brief and to the point.

- All messages shall be impersonal. The use of nicknames, first names, superfluous and unnecessary radio transmissions are forbidden.
- Do not use superfluous words and/or phrases such as "thank you", "will do", "roger", "can do", "please", etc.
- Pronounce words distinctly and not too rapidly. Choose words that are clear and forceful in sound, and convey a definite meaning. Keep your voice as emotionless as possible, regardless of the situation.

Radio Transmission Sequence: The calling sequence to establish communications is as follows:

- State the radio identifier you are calling. (Station, Fire Com, Fire Tap, Units, etc)
- State your radio identifier and wait for acknowledgment (except when responding, arriving or going in-service)
- State your Message

Violation of radio procedures or other causes for complaint, from either the dispatcher or field unit, will be processed through established channels.

All personnel must be aware of the responsibility attached to radio usage, and unjustified attempts to breach operational procedures may be subject to disciplinary action.

Radio Transmissions

Clear Speech and Approved Radio Codes.

Clear speech radio transmissions will be used by all radio dispatchers and user agencies. See Appendix A for examples of clear speech.

The following radio codes are approved to be used in conjunction with the clear speech.

EXAMPLE: Code 4 – Status Check or Status, situation under control

Phonetic Alphabet.

The phonetic alphabet (a series of words to represent letters) was devised to increase clarity in transmitting letters by telephone or radio.

There are times when it is used exclusively, such as transmitting the letters of a license numbers. Other times it is used sparingly for clarification as necessary-- in spelling a subject's last name for example.

A - ADAM	N - NORA
B - BOY	O - OCEAN
C - CHARLES	P - PAUL
D - DAVID	Q - QUEEN
E - EDWARD	R - ROBERT
F - FRANK	S - SAM
G - GEORGE	T - TOM
H - HENRY	U - UNION
I - IDA	V - VICTOR
J - JOHN	W - WILLIAM
K - KING	X - X-RAY
L - LINCOLN	Y - YOUNG
M - MARY	Z - ZEBRA

Broadcasting Numbers.

There are some general guidelines concerning broadcasting numbers on the radio. As with the phonetic alphabet and other general rules and procedures governing broadcasting, these guidelines were developed for the purpose of increasing clarity in transmitting. Certain numbers can, with the introduction of a small amount of technical interference such as static, sound just like other numbers. Given the importance of numbers in radio messages, addresses, telephone numbers, license plate numbers; it is critical that each number be clearly understood.

Use the number itself, rather than its ordinal form. For example, "Floor number five", rather than, "fifth floor".

When broadcasting a sequence of numbers, such as a telephone number or VIN number, break them up into logical groupings, with a small pause between groupings. The logical break in a telephone number is between the prefix and the last four digits. For VIN numbers, the logical grouping is in threes: "six-zero-two (pause) nine-one-four (pause) six-four-eight."

Remembering that someone is probably writing down the numbers will help the dispatcher to set a reasonable "copy speed" pace.

Always use "zero" for the number zero--not "oh". This rule is consistent throughout radio dispatching: The number is zero and the letter is "oh".

Twenty-four Hour Time.

All personnel use Twenty-four hour time. See Appendix B for 24-hour conversions.

SECTION TWO: Radio Basics

The Agency's Voice and Data 800 MHz radio system became operational in 1997 working in conjunction with VHF radio systems. Several fire agencies in areas of the County have remained on VHF. The primary County Fire Tap channel is interconnected between the 800 MHz and VHF systems via a patch.

The 800 MHz frequency range provides a large number of radio channels. VHF Channels Control 8, Red Net (Control 14), Fire Tap and Larch 1 are patched to the 800 MHz system.

The 800 MHz is a Trunked System. Motorola, who designed and installed the system, calls it a "SmartZone System." It consists of up to 10 radio transmitters per tower site. A system controller sends a digital control signal to all mobile and portable radios in the system. This signal provides instruction to the radio as to how it should function and on what radio channel.

Radio channels are assigned to common functions, such as dispatch, operations, etc.

Radio Types

There are three basic types of radios.

- Base Station radios – Installed in fixed facilities. Base stations typically remain on Fire Tap to receive dispatch tones.
- Mobile radios – Installed in apparatus. Mobile radios transmit and receive better than portables.
- Portable radios – Hand carried by personnel.

Radio Channels and Templates

Channel Identification.

The Dispatch Center transmits and receives on many different channels. To identify which channel is being used, Dispatch has established separate identifiers. See Appendix C.

Templates.

All 800 MHz Fire/EMS radio templates have identical banks except for the "A" bank which is agency specific. See Appendix D for example.

800 MHz Radio Features

See Appendix E for using the features of the 800 MHz radios.

SECTION THREE: Fire/EMS Operations

Fire Tap

Fire Tap is a patched 800 MHz and VHF repeater channel utilized to dispatch all Fire/EMS resources. There is no unit-to-unit or unit-to-dispatch communications on Fire Tap other than for the below listed VHF users and when VHF and 800 MHz users respond together:

North Country EMS, Clark County Fire Districts 10 and 13, Cowlitz-Skamania Fire District 7 and Skamania County Fire District 6.

These agencies will receive their tap-out on Fire Tap and all related dispatch information will occur on this same channel.

Fire Com

Fire Com will be used for dispatch-to-apparatus communications and voiced status updates which are not communicated via the MDC. Responders will move to Fire Com (with the exceptions of VHF users and when VHF and 800 MHz users respond together) immediately after the initial dispatch on Fire Tap to advise responding and all other status updates or communications.

OPS/TAC

OPS and/or TAC channels will automatically be assigned by CAD for any pre-defined CAD call types on multi-unit response. OPS/TAC channels can be manually assigned upon request. If an OPS/TAC channel is assigned, and all units have switched to it, communications between field units should be conducted on the OPS/TAC channel. CAD will automatically assign Control 8 or Control 14 as the pre-defined OPS/TAC channel when VHF users are responding. VHF users can request manual assignment of Control 8 or Red Net (Control 14).

Fire/EMS Dispatch

Alert tones and dispatch information are broadcast on Fire Tap.

Pre-alerts are utilized to alert fire and medic units that there is a medical call being triaged and coded. Pre-alerts only give the station area, nearest ambulance, the address and the map page of the pending medical response. Units utilize this available time between the pre-alert and dispatch to prepare and/or start responding to the address given, however, units need to wait until the call is dispatched before communicating (voice and MDC) to dispatch they are responding.

EXAMPLE: Fire Tap: (Alerting tones) "Station 6-1, Medic 16-4, Medical pre-alert, 7412 NE Highway 99, map page 2314."

When the call is coded, the fire/EMS dispatcher will transmit the dispatch assignment in the following order:

- Equipment to respond.
- Type of assignment.
- Location.
- Map page.
- OPS Channel (if applicable)
- Time of dispatch

EXAMPLE: Fire Tap:(Alerting tones) "E81, E88, T85 structure fire, 11705 NE 76th Street, map page 2210, OPS channel 41, time out 1140"

Failure to Respond.

It is expected that dispatched agencies will respond within three minutes. If there is no response, the dispatcher will repeat the tap out. After another minute and there is still no response, dispatch will tap out the next recommended unit.

Response.

VHF users remain on Fire Tap to communicate.

800 MHz users move immediately to Fire Com.

Responses involving both VHF and 800 MHz users will be assigned Fire Tap or a patched OPS channel for response.

MDC equipped units update response status using their MDC unless agency policy directs otherwise.

When voice communications is necessary, the word "responding" will be used to notify the Fire Com dispatcher when a unit is responding to an incident. Avoid unnecessary words.

EXAMPLE: E12-1: "Fire Com, E12-1 responding with four"
INCORRECT: E12-1: "Fire Com, E12-1 **will be** responding with four"

Units with MDCs will normally read details of calls on their MDC; however, dispatch will verbally relay vital information such as safety or significant on-scene changes.

Updated information will be provided after the units advise responding and will include:

- Routine patient information, condition and location on EMS calls.
- Specific information on fire related calls.
- Any pertinent information to allow the responding units to make the decision to stage, call a greater alarm before units arrive, or to modify the response.
- When a caller or other agency requests the call be canceled, the Fire Com dispatcher will notify the responding units of the request and reason for

cancellation. The units responding will make the final decision to continue or cancel the response.

EXAMPLES: M16-1, Citizen is requesting cancellation, going by private vehicle.
E11-3, BGPd on scene advises non-injury.

OPS/TAC Channel Assignment.

An OPS/TAC channel may be requested at any time by responding personnel.

CAD will automatically assign the OPS/TAC channel on all **FISB** (Big structure fires) and **FISBC** (Confirmed Big structure fires) responses. CAD will automatically assign Control 8 or Red Net as the OPS Channel when VHF users are included in the response.

Units responding to an incident on the OPS channel will monitor Fire Com for any updates.

OPS Channels are not always monitored by dispatch. Field units will switch to their designated response channel (normally Fire Com) to communicate with dispatch. Dispatch will transmit on the assigned OPS/TAC channel to relay critical information.

OPS/TAC Channel Usage.

Unit-to-unit communications while responding and/or on-scene should be done on the assigned OPS/TAC channel once directed to switch.

If more than one OPS/TAC channel is required, the Incident Commander will request additional OPS/TAC channel(s) from the Fire Com dispatcher and will advise dispatch when the assigned OPS/TAC channel(s) are clear to be used for other incidents.

The incident commander is responsible for coordinating communications with mutual aid agencies.

Arrival.

Unit arrival status is indicated by use of the MDC or voiced on your designated communications channel by broadcasting "arrived".

EXAMPLE:	E12-1: "Fire Com, E12-1 arrived"
	E10-1: "Fire Tap, E10-1 arrived"
INCORRECT:	E12-1: "Fire Com, E12-1 will be arriving "
	E10-1: "Fire Tap, E10-1 on-scene "

The first arriving unit and will give the size up on the communications channel.

EXAMPLE: "Fire Com, E3-1 arrived to a single story, wood frame structure, with flames showing through the roof. E3-1 is Risto Command; all units switch to OPS 41"

"Fire Com, E8-2 arrived to a single story, wood frame structure, with flames showing through the roof. E8-2 is Harney Command, switching back to OPS 41.

Dispatch will advise scene size-up by alpha/numeric page.

EXAMPLE: Harney Command, Working Fire
Algona Command, E82 can handle, all others can disregard.
NE 239th unfounded, all units cancel

Additional Resource Request

Any additional resources must be requested on the assigned communications channel unless the channel is too busy, then the request may be made on Fire Tap.

EXAMPLE: "Fire Com, BC8-2, (after dispatch acknowledgment)
Dispatch E8-6 to this fire."
"Fire Com, E11-1, (after dispatch acknowledgement)
Dispatch next closest Engine."

Emergency Traffic

Fire 800 MHz Emergency Mode.

Field personnel will activate their 800 MHz radio system emergency signal whenever assistance is needed or they are unable to verbalize details in the conventional manner and need to establish a priority radio channel.

When activated, the emergency signal does a "Ruthless Preemption" of the Fire Com channel. The radio system will seize and lock a radio channel, activates a channel warning on the Gold Elite radio console, and a warning on the CAD system.

The locked channel remains in preempt condition until released by the field unit.

When an emergency signal is activated, the dispatcher will determine the type of incident the unit is assigned.

In the event of an Emergency Alert Activation with a Fire Fighter down, CRESA will:

- Make a general broadcast on Fire Com, "Emergency traffic only on Fire Com, all other units switch to Fire Tap".

- Inform units, during any additional tap outs of the restricted radio traffic on Fire Com and to remain on Fire Tap or the assigned OPS/TAC channel.

To reset accidental emergency alert activations, turn the radio off and back on.

Emergency Egress Guide.

In the event of the need to issue an Abandon order from a structure. The Emergency Egress Guide defines the terminology to use. See Appendix F for details.

SECTION FOUR: Radio Identifiers

All Fire/EMS units, stations and personnel are assigned a radio identifier that can be used at any time.

Radio Identifier Composition

The identifier shall consist of three parts. The first part of the identifier is a word or word combination describing a station, unit type or personnel type (e.g. Engine, Truck, Battalion Chief, etc.). The second part identifies the agency (e.g. Vancouver Fire Department, AMR, Fire District 6, etc.) with a number. The third part identifies the specific unit or personnel with a number. This number, for units, typically corresponds to the station where the unit is assigned. See Appendix G for definitions of radio identifier types and agency identifiers.

Duplicate unit types housed in the same station may have an additional word/number (e.g., ENGINE 8-6 would be the first engine, ENGINE 8-6-1 would be the second).

Radio Identifier Composition Exception

An exception is North County EMS. This agency uses the agency name first, type of equipment second and unit number last.

Radio Identifier Examples

Radio Identifier	Spoken As	Meaning
E8-2	Engine – Eight-Two	Engine, Vancouver Fire, station 2
E8-2-1	Engine – Eight-Two-One	2 nd Engine, Vancouver Fire sta. 2
E12-1	Engine – Twelve-One	Engine, District 12, station 1
M16-1	Medic – Sixteen-One	Medic, AMR Paramedic Unit
NCM-1	North Country Medic-One	Medic unit from North Country EMS

SECTION FIVE: Computer Aided Dispatch (CAD)

Non-Medical Call Types

Response Modes.

Code 1	At your convenience
Code 2	Immediate Response
Code 3	Emergency Response, Use of lights and sirens

Medical Call Types

Medical Priority Dispatch System (MPDS) is used by call takers to classify requests for emergency medical assistance. By asking the reporting party, a series of pre-designated questions the response can be codified and pre-arrival instructions can be given to the caller.

Response Modes.

EMS response is designated by the phonetic letters A to E. American Medical Response (AMR) ambulances may be diverted from Alpha or Bravo calls to a higher priority until they arrive at scene. If an ambulance is diverted a replacement unit will be dispatched immediately.

TYPE I

Countywide Fire/EMS Areas, Excluding NCEMS and DNR

Response Determinant	Response Mode	
	First Response	Ambulance
Alpha	Code 2	Code 2
Bravo	Code 3	Code 2
Charlie	Code 3	Code 3
Delta	Code 3	Code 3
Echo	Code 3	Code 3

TYPE II

NCEMS and DNR Fire/EMS Areas

Response Determinant	Response Mode	
	First Response	Ambulance
Alpha	Code 2	Code 2
Bravo	Code 3	Code 3
Charlie	Code 3	Code 3

Delta	Code 3	Code 3
Echo	Code 3	Code 3

SECTION SIX: Interoperability

All 800 MHz radio systems in the Portland Metropolitan area have interoperability between units in each system on common channels. All units have a template showing which channels are available for that radio.

Communications required between non-public safety and police, fire, and EMS units within Clark County will be conducted on Clark A, B or C. Examples are Vancouver School District Security, C-Tran and Public Works.

Some departments have the Portland Fire Bureau channels programmed into their radio for move-ups and/or mutual aid when the channels are specified by Portland BOEC.

Multnomah County, Washington County, Clackamas County or Portland Fire agencies, may use the following channels for mutual response:

Metro A, B and C - All Clark County, Clackamas County, Multnomah County, Washington County and Portland users have these channels.

Clark A, B and C - All Clark County and Portland users have these channels.

Agencies may use other channels where pre-arrangement has been established between the agencies involved.

Law Enforcement References

To support communication with law enforcement a copy of police radio codes and radio identifiers are attached. See Appendix H and I.

SECTION SEVEN: Medical and Military Air Support

There are two categories of air support available, Medical and Military.

Medical Air Support (Life Flight) is used solely for medical transport of critically ill or injured that have be treated, assessed and prepared for transport by ground crews.

Military Air Support can be used for search and rescue, extraction and transportation of lost, stranded and/or critically injured patients requiring skills above what can be provided by Medical Air Support services.

Medical Air Support – Life Flight.

- Life Flight currently maintains two helicopters and crews capable of Medical Air Support. They are dispatched out of Emmanuel Hospital in Portland.
- One helicopter is stationed at Hillsboro Airport in Hillsboro, Oregon with an approximate airborne flight time of seven minutes and the second is stationed at the Aurora Airport in Aurora, Oregon with an approximated airborne flight time of 12 minutes to downtown Vancouver.

A request to place Life Flight on standby may come from any fire/EMS or law enforcement unit en route to or on-scene. A Dispatcher may place Life Flight on standby when the information indicates a critical, traumatic injury, which may warrant the use of Life Flight and ground transport would take longer than 20 minutes. Dispatch will provide the type of incident, address, the cross streets if available and GPS information from either the ER Map or a field unit.

The decision to activate Life Flight can only come from an on-scene physician or the responding paramedic. There are medical protocols that allow exceptions due to circumstances at the scene which are conveyed to the responding paramedic. The responding paramedic has final authority to activate. Neither the Incident Commander nor dispatchers have activation authority.

Upon request for Life Flight activation, Life Fight Dispatch will be provided with the following information by CRESA Dispatch.

- If not placed on Standby prior to activation, provide the type of incident, address, the cross streets if available and GPS information from either the ER Map or a field unit.
- "Ground contact is (unit identification) on frequency 154.370. Transmit tone 127.3 hertz".
- Landing Zone information.

All responding units will be advised that Life Flight has been activated and their ETA to the scene.

Military Air Support.

There is a military unit to assist where air support above the capabilities of Life Flight is required or if Life Flight is not available. They may be called directly whenever life, limb or eyesight is in jeopardy or hoist extraction is required regardless of medical condition.

The 1042nd Medivac Wing is located at the Army National Guard Base in Salem, Oregon. The Wing is equipped with Blackhawk Helicopters capable of carrying six patients and has hoist and FLIR capabilities.

- The helicopters are available 24/7 with crews on base or on-call. Airborne flight time to downtown Vancouver is 30 minutes. Their medical staff consists of EMT-B (National Registry) and ALS medics.
- CRESA Dispatch should be advised by the Wing at time of lift-off what level medic will be on board. They prefer to take an on-scene medic with the patient, but it is not required.

Military Air Support Activation.

The decision to activate Military Air Support can only come from an on-scene paramedic or the Incident Commander. Dispatchers **do not** have activation authority. Dispatch will call the unit directly.

Upon request for Military Air Support activation, Dispatch will call the 1042nd and provide the person taking the call with the following information.

Type of incident and any specific equipment required such as a hoist.

- General Location and GPS information from either the ER Map or a field unit.
- "Ground contact is (unit identification) on frequency 154.370. Transmit tone of 127.3 hertz."
- Landing Zone information

Dispatch will advise all responding units what unit has been activated and their ETA to the scene.

Search and Rescue Operations.

Dispatch will immediately notify the Emergency Management Duty Officer of a request by the Incident Command for air support for a search and rescue operation. Emergency Management is responsible for coordinating all resources for search and rescue operations. A "Mission Number" authorizing the operation is required by the State.

Glossary

Apparatus	A unit such as Engine, Truck, Ambulance, Squad
Arrived	
CAD	Computer Aided Dispatch
Channel	Used in this document to universally identify channels, frequencies such as Fire Tap, Fire Com, OPS 41-49.
Channel - Communications	Normally Fire Com unless alternate channel assigned by dispatch such as Fire Tap for VHF users.
Channel - Safety	Pre-programmed channel on every 800 MHz radio. Other channel may be designated by the Incident Commander.
Field Unit	Any staffed apparatus on-duty
Fire Com	Used for dispatch-to-apparatus communications and voiced status updates which are not communicated via the MDC.
Fire Tap	Patched 800 MHz and VHF channel utilized to dispatch all Fire/EMS resources.
In-Service	
MDC	Mobile Data Computer used to receive dispatch information and update unit status.
Move-Up	
OPS	Series of channels available on all 800 MHz radios for fire ground use.
Pre-Alerts	Utilized for medical calls to alert the responders while the call taker is triaging the call for the proper call code and are tapped out to the jurisdictional station and closest ambulance by giving the address of the incident.
Radio - Base	Installed in fixed facilities. Base stations typically remain on Fire Tap to receive dispatch tones.
Radio - Mobile	Installed in apparatus. Mobile radios transmit and receive better than portables
Radio - Portable	Hand carried by personnel
Radio Identifier	Utilized when communicating radio-to-radio. A combination of letters and numbers defining station, unit or personnel type, identifying the agency and the specific unit or personnel with a number.
Radio Patches	Used to patch radio channels together such as the 800 MHz/VHF Fire Tap Channel.

Repeaters	Used to boost and re-broadcast radio signals from one radio to another.
Responding	
Simplex	Short-range transmission that does not utilize a repeater.
Simulcast	Where radio transmissions are transmitted on the same channel from two or more locations at the same time.
TAC	Series of channels available on all 800 MHz radios primarily used by law enforcement but available to Fire/EMS for mutual aid or in the event all OPS channels are busy.
Template	Visual dispatch of radio banks and assigned channels within each bank.
Unit Move	Communication procedure used to notify dispatch of which station areas apparatus are currently located in or moving to.
User Agency	Any jurisdiction served by CRESA

Appendix A – Clear Speech Radio Transmissions

ABANDON	The immediate abandonment of a premise by all personnel by whatever means is available, leaving equipment behind.
AFFIRMATIVE	Yes (Note: one-syllable words do not always transmit clearly unless used in conjunction with another word).
ARRIVED	Arrived at the scene
ASSIST	Provide assistance
CANCEL	Term used to direct responding unit(s) to stop responding and return to the station or a previous assignment.
EVACUATE	To remove all civilian or non-fire personnel from the premise or area.
HELP	Help or assistance needed. (Immediate attention is required, and the words demand the dispatcher's complete attention and priority airspace).
IN SERVICE	Finished last assignment and available for another.
MAYDAY, MAYDAY, MAYDAY	In the event that a firefighter perceives the need for immediate assistance to assure their safety, the radio distress signal, "MAYDAY, MAYDAY, MAYDAY" will be used by the firefighter(s) in trouble to attract attention to their plight. The IC or designated supervisor shall acknowledge the Mayday, clear the channel of all nonessential traffic, obtain a detailed description of the situation, and will immediately direct the team that has been assigned RIT function to the location of the firefighter, or if unknown, to the last known location or probable location of the firefighter.
NEGATIVE	No
OUT-OF-SERVICE	Unit is unavailable for response
PATIENT	Term used when referring to injured/sick person.
RECEIVED	Acknowledged (heard and understood)
REPEAT	Say it again
REPORTING PARTY(RP)	Person reporting incident
REQUEST	Ask for
RESPONDING	En route to an incident
SAFETY ZONE	Designates the Safety Zone where all personnel are to report on an "Abandon" or "Withdraw" broadcast.
STAGING	Fire/EMS will stage a safe distance from an incident until Law Enforcement advises it is clear for them to respond to the location. On a major incident, the staging location may designate a location from which units are then given detailed instructions prior to arrival on scene.
STANDBY	Defer transmission or action momentarily.
WITHDRAW	An orderly withdrawal from a premise/area by fire personnel, taking tools and equipment with them.

Appendix B – Twenty-four Hour Time

CONVERSION:

<u>24 hour</u>	<u>12 hour</u>	<u>24 hour</u>	<u>12 hour</u>
0100	1:00 AM	1300	1:00 PM
0200	2:00 AM	1400	2:00 PM
0300	3:00 AM	1500	3:00 PM
0400	4:00 AM	1600	4:00 PM
0500	5:00 AM	1700	5:00 PM
0600	6:00 AM	1800	6:00 PM
0700	7:00 AM	1900	7:00 PM
0800	8:00 AM	2000	8:00 PM
0900	9:00 AM	2100	9:00 PM
1000	10:00 AM	2200	10:00 PM
1100	11:00 AM	2300	11:00 PM
1200	12:00 NOON	2400	12:00 MIDNIGHT

EXAMPLE:

<u>24 HOUR</u>	<u>12 HOUR</u>	<u>SPOKEN AS</u>
0001	12:01 AM	ZERO ZERO ZERO ONE
0030	12:30 AM	ZERO ZERO THIRTY
0100	1:00 AM	ZERO ONE HUNDRED
0245	2:45 AM	ZERO TWO FORTY FIVE
0605	6:06 AM	ZERO SIX ZERO FIVE
1000	10:00 AM	TEN HUNDRED
1009	10:09 AM	TEN ZERO NINE
1147	11:47 AM	ELEVEN FORTY-SEVEN
1200	12:00 NOON	TWELVE HUNDRED
1300	1:00 PM	THIRTEEN HUNDRED
1445	2:45 PM	FOURTEEN FORTY-FIVE
2000	8:00 PM	TWENTY HUNDRED
2030	8:30 PM	TWENTY THIRTY
2318	11:18 PM	TWENTY-THREE EIGHTEEN
2400	12:00 MIDNIGHT	TWENTY-FOUR HUNDRED

Appendix C – Dispatch Center Radio Channel Identification

Identification	Descriptions
FIRE TAP	Dispatch for all fire/EMS agencies
FIRE COM	Response/Communication for all 800 MHz Fire/EMS
CONTROL 1	LAW ENFORCEMENT DATA
CONTROL 2	REGIONAL LAW – All law enforcement except Vancouver Police
CONTROL 3	VANCOUVER POLICE
CONTROL 4	SPECIAL EVENTS
CONTROL 5	SPECIAL EVENTS
CONTROL 8	VHF FIRE OPS – VHF channel patched to 800 MHz
CONTROL 11	OPERATIONAL – Vancouver Operations Center
CONTROL 12	OPERATIONAL – Vancouver Operations Center
CONTROL 13	OPERATIONAL – County Department of Public Works
RED NET	VHF FIRE OPS, STATE FIRE RED NET --VHF channel patched to 800 MHz and also referred to as Control 14

Appendix D – Radio Template

This is a sample of a radio template. Individual agencies will vary. Multiple banks with more channels exist.

A	B	C
FIRE TAP	CTRL 7	TAC 1
FIRE COM	CTRL 9	TAC 2
OPS 40	LIFE FLIGHT	TAC 3
OPS 41	SWWMC	TAC 4
OPS 42	MRH	TAC 5
OPS 43	CC TRAINING 1	TAC 6
TAC 1	CC TRAINING 2	TAC 7
TAC 4	CC TRAINING 3	TAC 8
TAC 5	CC TRAINING 4	TAC 9
TAC 6	CC TRAINING 5	TAC 10
TAC 7	MOBILIZATION	TAC 11
TAC 8	AREA COMMAND	CTRL 8
CTRL 8	FIRE ADMIN	CTRL 14
CLARK A	CLARK B	CLARK C
ADMIN	SIMPLEX 1	SIMPLEX 2
MAYDAY	MAYDAY	MAYDAY

Appendix E – 800 MHz Radio Features

CRESA will provide this information at a later date. This information will cover how to use the features of an 800 MHz radio.

Appendix F– Emergency Egress Guidelines

Clark County Fire Chiefs Operations Division

Emergency Egress Guideline

SUBJECT: Emergency egress of structures

PURPOSE: To define/identify the three different types of egress from structures

APPROVED: 09-09-03

REVISED:

SEE ALSO:

PAGES: 2

TERMINOLOGY FOR EMERGENCY EGRESS OF STRUCTURES

1. **Abandon:** The term “abandon” is used to direct companies or crews operating in the hazard zone to immediately exit via escape routes to a safety zone. For example, at a structure fire the order to “abandon the building” directs all companies or crews in the hazard zone to immediately exit to a safety zone. Companies or crews abandoning the hazard zone will take only the tools, equipment and hose lines necessary to permit their emergency egress.
2. **Withdraw:** The term "withdraw" is used to order a controlled tactical movement from current operating positions to a safer location. For example, offensive operations at a structure fire could be shifted to defensive by ordering the companies to "withdraw from the building". Companies or crews withdrawing from an operating position will also remove tools, equipment and hose lines.

Evacuate: The term "evacuate" will be limited to removal of civilians who are exposed or potentially exposed to hazards presented by the incident, i.e. evacuation of exposures at a structure fire or evacuation conducted downwind of a hazardous materials release.

3. **Emergency Traffic:** The phrase "emergency traffic" is the code word used in radio communications to indicate a critical, life safety related message. Emergency traffic has priority over all other radio communications with the exception of a mayday message. Situations in which emergency traffic communications are indicated are but not limited to:
 - Abandoning the hazard zone
 - Reporting extreme safety hazards such as imminent structural collapse
 - Changing strategy from offense to defense
 - Requesting additional resources in a critical situation
4. **Safety Zone:** An area of safe refuge located outside the hazard zone.

ABANDON ORDER

In the event a situation occurs that an emergency abandonment of a structure or area by all firefighters is required, an alert tone (10 seconds) generated by CRESA will be sounded in conjunction with an audible abandon signal on the fire ground. Verbal "emergency traffic" information will immediately follow the alert tones on all frequencies in use on the scene, followed by the continuous sounding of air horn and sirens for a period of ten seconds. When abandonment of a structure or area is needed, the sequence of events is as follows:

1. The IC will announce "emergency traffic" and order an immediate abandonment of a structure or area, by all divisions, over the radio. At this time, apparatus operators in the immediate area will sound the audible abandon signal (air horn and/or sirens) for 10 seconds.
2. The IC will then contact a CRESA dispatcher and request the abandon alert tone be sounded. The IC will also advise the dispatcher of pertinent "emergency traffic" information that should immediately follow the alert tone. If applicable, the announcement will also include the location of a meeting place(s) in a safe zone. The dispatcher will tap out the alert tone on all frequencies in use, followed by the "emergency traffic" information relayed from the IC.
3. Division Supervisors will order all crews out of their respective area of responsibility immediately.
4. The IC will start a PAR by Division, beginning with Division most at risk.
5. Each Division Supervisor will account for their assigned personnel, and advise the IC. If there are no Division Supervisors, the IC will assume that responsibility.
6. Simultaneous with the abandon signal and the PAR, the RIT will proceed to the Division most at risk to prepare for rescue operations if needed.
7. If anyone is not accounted for, the abandon alert tone/signal will be repeated.

Appendix G – Radio Identifiers

Radio identifier types (part 1 of 3):

TYPE	CAD CODE	DEFINITION
AIR	A	A special purpose vehicle used primarily for re-filling self-contained breathing tanks.
BATTALION	BC	Battalion Chief.
BOAT	BO	A vessel or watercraft designed and constructed for fighting fires providing specified level of pumping capacity. The boat is designed to carry firefighting foam and personnel for the extinguishment of fires in the marine environment.
BIKE	BI	Specialized EMS response team providing services.
BRUSH	B	A vehicle whose primary purpose is fighting brush fires and it qualifies as a Type 6 Engine (NWCG).
CAPTAIN	CP	A Captain
CHAPLAIN	CH	Fire Chaplains
CHIEF	C	An administrative chief officer.
COMMAND	CO	Vehicle used primarily as a mobile office and communications center for command staff at a large or lengthy incident.
COMMUNICATIONS	CU	A communications resource vehicle
EMERGENCY MEDICAL PERSONNEL	EM	A person with medical training.
ENGINE	E	A vehicle that meets NFPA 1901 standards for an engine.
FIRE MARSHAL	FM	County or City fire marshal office.
HAZMAT	HM	A special purpose vehicle used primarily for hazardous material incidents.
INSPECTOR	I	A Fire Inspector
LIEUTENANT	LT	A Lieutenant
MCI TRAILER		A trailer used for mass or multiple casualty incidents.
MEDIC	M	A vehicle that provides EMS service and is transport capable.
NORTH COUNTRY	NC	A North Country EMS vehicle
PERSONNEL	P	A person who is not assigned to an apparatus.
PORTLAND CHIEF	PC	A Portland Fire Bureau Battalion Chief
PORTLAND ENGINE	PE	A Portland Fire Bureau Engine
PORTLAND TRUCK	PT	A Portland Fire Bureau Truck

TYPE	CAD CODE	DEFINITION
PUBLIC INFORMATION OFFICER	PI	A person who is a Public Information Officer
PUMP		A person assigned to operate a pump on a designated apparatus, e.g. Engine 11-3, Pump.
REHAB	RE	Vehicle used primarily for physical care of personnel working at an incident.
PREVENTION	PR	An administrative prevention officer not assigned to an apparatus.
RESCUE	R	A vehicle that provides EMS service but is not transport capable.
RESCUE BOAT	RB	A watercraft used for water rescue.
SQUAD	S	A vehicle that performs two or more separate functions consistently. One of those functions is that it qualifies as a Type 6 Engine (NWCG).
STATION		A facility that houses fire or EMS equipment.
TECHNICAL RESCUE TEAM	TR	A special purpose vehicle used primarily for technical rescue incidents.
TENDER	TE	A vehicle that carries over 1,000 gallons of water.
TRAINING		A person assigned to training
TRUCK	T	A vehicle that meets NFPA 1901 standards for a ladder truck and that includes a minimum of four (4) trained personnel.
TOWER	TO	A vehicle that meets NFPA 1901 standards for an engine, with a permanently mounted elevating master stream.
UNIT	UN	A staff vehicle, not necessarily assigned to a particular station.
UTILITY	UT	A non-emergency service vehicle.

Radio identifiers for Fire/EMS agencies (part 2 of 3):

SECOND WORD	DEPARTMENT
ONE	Clark County Fire District 1 (East County Fire & Rescue)
THREE	Clark County Fire District 3
FOUR	Camas Fire Department
FIVE	NW Regional Training Center (FD 5)
SIX	Clark County Fire District 6
SEVEN	Cowlitz – Skamania County Fire District 7
EIGHT	Vancouver Fire Department
NINE	Clark County Fire District 9 (East County Fire & Rescue)
TEN	Clark County Fire District 10
ELEVEN	Clark County Fire District 11, Battle Ground
TWELVE	Clark County Fire District 12, Ridgefield, La Center

SECOND WORD	DEPARTMENT
THIRTEEN	Clark County Fire District 13, Yacolt
FIFTEEN	Clark County Fire District 6, 11, and 12 combined station
SIXTEEN	American Medical Response
SEVENTEEN	Washougal Fire Department
TWENTY-TWO	Clark Regional Emergency Services Agency
TWENTY-THREE	Georgia Pacific Rescue Team
TWENTY-SIX	Skamania County Fire District 6, Northwoods
PORTLAND	Portland Fire Bureau

Appendix H– Law Enforcement Radio Codes

CODE 0	OFFICER NEEDS HELP LIFE THREATENING EMERGENCY
CODE 1	ROUTINE RESPONSE
CODE 2	URGENT RESPONSE
CODE 3	EMERGENCY RESPONSE
CODE 4	STATUS CHECK OR STATUS
CODE 5	SURVEILLANCE
CODE 6F	POSSIBLE FELONY WARRANT
CODE 6M	POSSIBLE MISDEMEANOR WARRANT
CODE 7	MEAL BREAK
CODE 20	OFFICER NEEDS ASSISTANCE URGENT RESPONSE
CODE 33	DO NOT TRANSMIT UNLESS EMERGENCY
CODE 55	PERIMETER (PREASSIGNED)
10-43	CLEAR TO RECEIVE CONFIDENTIAL INFO

Appendix I – Law Enforcement Radio Identifiers

Prefix	Department Identification	Prefix	Department Identification
1	Clark County Sheriff	11	Washington State Liquor Control
2	Vancouver Police	13	Federal Bureau of Investigation
3	Camas Police	19	Clark County Fire Marshal
4	Washougal Police	20	Washington State University Police
5	Battle Ground Police	21	BNSF Railroad Police
6	Ridgefield Police	22	CRESA
7	La Center Police	27	IRS – Criminal Investigation Unit
8	Clark County Medical Examiner	28	Washington State DOC
9	Clark Co. Juvenile Services Dept.	29	Washington State DNR
10	CCSO – Weight Enforcement		

	Functional Assignment		Functional Assignment
ADAM	Officers above Sgt.	NORA	Drug Task Force
BOY	Graveyard Patrol	PAUL	Patrol Special Investigation.
CHARLES	Civilian Unit	ROBERT	Reserve Personnel
DAVID	Day Shift Patrol	SAM	Swing Shift Patrol
EDWARD	Explorers	TOM	Traffic
FRANK	School Resource Ofcr.	VICTOR	Marine Patrol
GEORGE	Detention	WILLIAM	Warrant Detail
HENRY	Canine Unit	WILLIAM	Courthouse Deputy
KING	Detective/Investigator	X-RAY	Sergeant
LINCOLN	Personnel Number	YOUNG	Bicycle Detail
MARY	Special Details	ZEBRA	Tactical Units

Suffix

The suffix consists of one or more numbers that designate, depending upon function, the beat number, the officer personal number, a detail number or a randomly assigned number.